



www.gemsl.com



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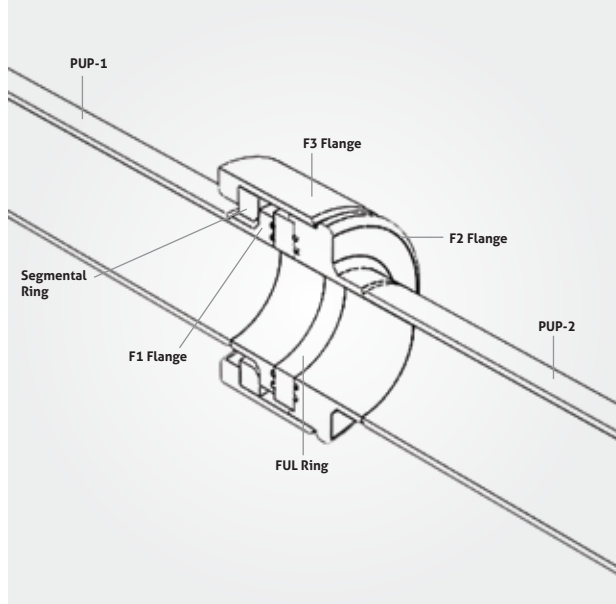
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■ **Manufacturing Site**

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■ **Monolithic Isolation Joints**



Introduction

General Energy Management Systems Pvt. Ltd. (GEMS) has a well-planned and well-equipped packaging facility in Pune measuring a built up area of 6,200 sq. meters on a land area measuring 10,000 sq. meters. **GEMS** Monolithic Isolation Joints are manufactured under strictly regulated quality assurance conditions ensuring close control over all stages of production.

Manufacturing Excellence

Each Monolithic Isolation Joint is designed and manufactured at our plants in India that is **ISO 9001:2015 Certified** and **ASME 'U' & 'R'** stamp approved. The facility has been approved by esteemed corporate like GE Water, GE-AST and Burckhardt Compressors among others.

GEMS MIJs once installed, can be forgotten regarding any maintenance worries. This assures increased plant and equipment life by reducing corrosion damage.



The Long Tail Advantage

Corrosion destroys nearly 30% of the World's annual production of Steel. Pipelines that are buried for transportation of Water, Gas and other Hydrocarbons are prone to corrosion resulting in serious damage to the pipelines. Such damages can be avoided if the pipelines are provided with effective

Cathodic Protection (CP). In addition, the electrical insulation on pipelines is acted by means of special fittings referred as Monolithic Isolation Joints (MIJ).

The MIJs effectively and efficiently stops short circuits and stray currents from damaging pipelines and equipment. The MIJs are boltless structures that provide electrical resistance between the pipeline sections and adjoining structures thus providing the effectiveness of the Cathodic Protection System.

Technical Specifications:

Size : 1/2" - 24" NB
Pressure Class / ANSI Rating : 150#/ 300#/ 600#/ 900#. It can be expanded up to 2500#

Warranty : 2 years from the date of shipment

Applications / Service Conditions : **A)** High Pressure Natural Gas pipe line systems for providing isolation to cathodically protected pipelines.

B) For electrical insulation of gas and oil pipe lines.
C) Suitable for flow media such as crude oil, Kerosene, gasoline, coal gas, nitrogen, drinking water, etc.

Location : Onshore / Offshore

Suitable Medium : Oil, city gas, natural gas, LNG, LPG, etc.

Working Temperature : -10°C to 80°C

Pipe Pup Material : API 5L Gr. B; API 5L X 42 to 70; ASTM A 106 Gr. B; ASTM A333 Gr. 6.

Forged Body (Ring) Material : ASTM A694 F42 to 70; ASTM A105; ASTM A350 LF2.

TPI : Third party inspection agency appointed by Purchaser / Manufacturer and approved by purchaser.

Inspection & Testing

Acceptance standard for RT : As per ASME Section VIII, Div. 1/ API 1104

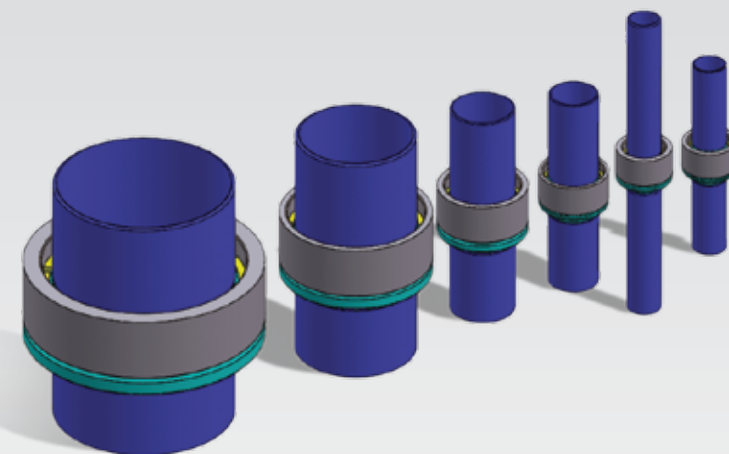
Hydrostatic Test : 1.5 times the Design Pressure

Dielectric Test : 5kV for 1 min @ 50Hz - AC

Electrical Resistance : >5 MΩ @ 1000V - DC

Non-Destructive Testing : MPI, UT, X-Rays, LPT on welds 100% visual & dimensional check

Third Party review testing : BVQI, or as per client's requirement.



Insulating Material & Features

- **ANSI B16.25:** But Welding Ends
- **ASME B31.8:** Gas transmission & distribution piping systems
- **API 1104 specification** for welding pipeline & related facilities
- **ASME SEC.VIII - Div.1,** Boiler and Pressure Vessel Code Rules for the Construction of Pressure Vessels
- **Design Principle:** As Per ASME Sec. VIII-Div. 1, Appendix 2.
- **Qualification Standards for Welding and Brazing:** As per ASME IX
- **Design Factor:** 0.5
- **External & Internal surfaces coating of insulating joints:** Suitable Epoxy Resin with a min. DFT of 300 microns.

We can also manufacture any other non-standard sizes as per customer's specifications.